

REMARKS

This is in response to the Office Action mailed on July 24, 2002. Claims 1-20 are pending in the application. Applicants have amended claim 17. The amendments do not constitute the addition of new matter. Support for the changes may be found in the specification, drawings and claims as originally filed. The changes made by the current amendment are attached hereto in a document entitled "Version With Markings to Show Changes Made." Entry of the amendment is respectfully requested. Applicant has Reconsideration and allowance of all pending claims is respectfully requested.

Claim Rejections- 35 U.S.C. § 112

The Examiner rejected claim 17 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant has amended claim 17 to correct a typographical error with respect to the phrase "a less opaque liquid." Applicant respectfully requests that the Examiner withdraw his rejection of claim 17 and indicate that such claim is allowable.

Claim Rejections- 35 U.S.C. § 102

The Examiner rejected claims 11, 14-15 as being anticipated by Hess et al., United States Patent No. 6,047,489 (Hess '489). Applicant respectfully traverses this rejection.

Flame effect element (58) of Hess '489 is disclosed as a single thin sheet of light-weight, substantially opaque, material. Col. 4, lines 15-17. A plurality of slits (66) are cut into the flame effect element (58) to allow light to pass through to screen (42). Col. 4, lines 18-22. Light is transmitted from a light source (30) positioned behind the flame effect element (58) through slits (66) to a diffusing surface (46) of the screen (42). Col. 4, lines 54-56. Hess '489 also discloses a second embodiment of flame effect element (58') that includes a similar arrangement to flame effect element (58).

Hess '489 does not disclose reflecting light off of the flame effect element (58, 58'). Light from light source (30) passes through the slits in flame effect element (58, 58') to simulate a flame effect.

Applicant's claim 11 includes reflecting light from a light source off of a moveable bobble-flame and onto a screen. Applicant does not claim the use of a pass through slit system for generating a flame effect. Applicant positions its bobble-flame to reflect light onto the screen. Therefore, claim 11 is in allowable condition, and claims 14-15, which depend from claim 11, are also allowable. Because claims 11, 14-15 are in allowable condition, Applicant respectfully requests that the Examiner withdraw his rejection of those claims.

Claim Rejections- 35 U.S.C. § 103

Hess '489 and Morton

The Examiner rejected claims 1-7, 12, 16, 18-19 as being unpatentable over Hess '489 in view of Morton, United States Pat. No. 6,078,424 ("Morton"). Applicant respectfully traverses this rejection.

Hess '489 discloses a screen (42) having a partially reflecting surface (44). Col. 3, lines 58-60. Hess '489 focuses on the use of reflection of an image off of screen (42) to generate depth. The creation of depth and realism is wholly dependent on the object that is placed in front of the screen (42), such as fuel bed (26).

Hess '489 incorporates U.S. Pat. No. 4,965,707 ("Butterfield") to provide a more detailed structure for screen (42). Butterfield discloses: "the partially reflective property [of the screen] is such as to reflect light from the simulated fuel bed so that the simulated flames appear to emanate from a position between the simulated fuel and its reflection in the screen. This considerably improves the realism of the simulated flames and is surprisingly effective." Butterfield at Col. 2, lines 1-6.

Hess '489 further discloses: "[t]he screen 42 is positioned immediately behind the fuel bed 26 so that the fuel bed 26 will be reflected in the reflecting surface 44 to give the illusion of depth." Col. 4, lines 1-3. Additionally, Hess '489 focuses on the creation of flames emanating between the fuel bed (26) and a reflection of fuel bed (26) and from the fuel bed (26) itself. Col. 4, lines 3-8. In Hess '489, lighting is used to enhance reflection in the screen (42). Col. 4, lines 8-11. This further illustrates the importance Hess '489 places on using reflection to create depth and flame realism. Hess '489 solves its

identified problems with reflection and does not teach or suggest another method to do so.

Morton discloses a lenticular screen separate from an image bearing member. In Morton, the image bearing member is moved relative to the lenticular screen.

Applicant claims a lenticular screen used in a fireplace to simulate a fire. See claims 1-7, 12, 16, 18-19. The lenticular screen includes a lenticular lens layer and an image layer that is disposed on the lenticular lens layer. Id. The lenticular screen creates depth and realism by providing a three-dimensional image for viewing. Application at p. 6, lines 2-6 and 27-28. The lenticular screen does not rely upon reflection to create that depth. Id. The realism of the image is enhanced through changes in the image that occur as the viewer moves relative to the fireplace. Id. at p. 6, lines 12-21. Applicant's creation of depth and realism has no dependence upon the object placed in front of it because reflection is not used.

Hess '489 does not provide any motivation for its combination with Morton to create the claim invention. In fact, Hess '489 focuses on the importance and necessity of reflection, which teaches away from the combination of the two cited references. As described above, a lenticular lens creates depth in a completely different way from a partially reflective surface on a screen. Further, nothing suggests or teaches that one skilled in the art would simply replace screen (42) of Hess '489 with the lenticular screen of Morton. This combination of Hess '489 and Morton is an impermissible hindsight selection of elements from the references in view of the claimed invention.

With regard to claim 19, the Examiner mischaracterizes that claim to include a lenticular screen. Claim 19 does not recite this limitation. Rather, claim 19 discloses a method that utilizes reflection off of a moveable bobble-flame to generate a flicker effect on a translucent panel. As discussed above, Hess '489 discloses a pass through slits system for generating a flame effect, not reflecting light off of a moveable bobble-flame.

Therefore, claims 1, 4, 6, and 18 are in allowable condition, and claims 2-3, 5, and 7, which depend from those claims, as well as claims 12 and 16, are also allowable. Additionally, claim 19 is in allowable condition. Because claims 1-7, 12, 16, 18-19 are in allowable condition, Applicant's respectfully request that the Examiner withdraw his rejection of those claims.

Hess '489 and Kashyap

The Examiner also rejected claims 8, 10, and 20 under 35 U.S.C. §103(a) as being unpatentable over Hess '489 in view of United States Pat. No. 6,094,291 ("Kashyap").

Hess '489 discloses a transparent front panel (24) that partially defines a front wall of the fireplace. Col. 3, lines 6-9 and Col. 8, lines 6-8. The purpose of Hess '489 is to create a simulation of a fireplace that is viewable. Hess '489 teaches that a fire screen (234) or silk screen can be used to reduce glare on the transparent front panel (24). Col. 8, lines 5-16. The fire screen (234) does not completely obstruct the view into the fireplace and is disclosed as enhancing the view of the simulated fire.

Kashyap discloses a bi-moded fiber for supporting optical transmission modes. The bi-moded fiber can be used to control the intensity of optical radiation that passes through an output fiber. The intensity is controlled by changing the phase of the radiation, not changing the phase of a solid fiber such as from a solid to a liquid.

Applicant claims an electrically conductive panel that, after heating, changes from an opaque solid to a less opaque liquid to selectively obstruct the view into the fireplace or to allow viewing. This element is missing from Hess '489 and Kashyap. The subject matter of Kashyap is completely different than Applicant's claims. Kashyap utilizes fibers that transmit radiation. An electric field changes the phase of the radiation, not the phase of a material, which then regulates the output of the fiber. Kashyap does not utilize a solid that changes to a liquid to allow selective viewing.

Further, Hess '489 is directed to providing a viewable simulated fire and does not teach that it would be desirable to selectively block the view of the components within the fireplace. Although Hess '489 discloses the use of a mesh screen in front of a transparent front panel (42) to reduce glare, nothing in Hess '489 teaches or suggests that the view into the fireplace should be selectively blocked or unblocked.

Therefore, claims 8, 10, and 20 are in allowable condition. Because claims 8, 10, and 20 are in allowable condition, Applicant's respectfully request that the Examiner withdraw his rejection of those claims.

Conclusion

In view of the above amendments and remarks, claims 1-20 are now in condition for allowance. Reconsideration and allowance are respectfully requested. The Examiner is encouraged to contact the undersigned attorney with any questions regarding this application.

Respectfully submitted,

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	MIX ET AL.	Examiner:	JULES, FRANTZ F
Serial No.:	09/859,719	Group Art Unit:	3617
Filed:	MAY 16, 2001	Docket No.:	12929.1059US01
Title:	LENTICULAR FIREPLACE		

MARKED UP VERSION TO SHOW CHANGES MADEIn the Claims

Please amend claim 17 as follows.

17. (Once Amended) A fireplace for simulating a natural fire, comprising:
- a front wall, wherein the front wall comprises an electrically conductive panel coupled to a phase change material;
 - electrical terminals operatively connected to the electrically conductive panel for applying a voltage across the electrically conductive panel to heat the front wall and convert the phase change material from an opaque solid to a less opaque liquid to allow viewing through the front wall;
 - a lenticular screen having a front surface and a back surface, wherein the lenticular screen is viewable through the front wall when the phase change material comprises [a] the less opaque liquid, wherein the lenticular screen comprises a lenticular lens layer and a fire image layer disposed on the lenticular lens layer;
 - a device coupled to the lenticular screen that alters the position of the lenticular screen to change a viewed image of the fire;
 - at least one bobble-flame coupled to a support panel;
 - a blower that blows air out and moves the bobble-flame; and
 - a light source to reflect light off of the bobble-flame and onto the back surface of the lenticular screen to generate an image of a flickering flame effect that is viewable from the front surface of the lenticular screen.